FAX TRANSMITTAL SHEET

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DATE: 10/8/2004

FROM: John Harrison

TO: Carlito Caliboso, Public Utilities Commission (586-2066)

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SUBJECT: East Oahu Transmission Project:
46kV Phased Project (DEA)

UNIVERSITY OF HAWAI_I AT MANOA
Environmental Center

October 8, 2004

EA: 0304

Mr. Carlito Caliboso, Chairman
State of Hawai'i Public Utilities Commission
465 South King Street, First Floor
Honolulu, Hawai'i 96813

Dear Mr. Caliboso:

Draft Environmental Assessment
East O'ahu Transmission Project 46 kV Phased Project
O'ahu, Honolulu

Hawaiian Electric Company, Inc. (HECO) proposes to reconfigure and connect existing 46 kilovolt (kV) circuits from Pukele Substation at the end of HECO's Northern 138 kV Transmission Corridor with existing and new 46 kV circuits at Archer Substation and Kamoku Substation in HECO's Southern 138 kV Transmission Corridor. The proposed project involves two phases: Phase 1 involves installation of 0.5 mile of new underground ductline for 46 kV lines and related work at eight existing substations, including the removal and replacement of existing 46 k and 12 kV cables in 0.4 mile of existing ductline. Phase 2 involves installation of 1.9 miles of new underground ductline for 46 kV transmission lines, predominantly along King Street. Construction activities would include open trenching, installation of new ductline and circuits, removal of existing circuits and installation of new cable, and repaving of trenched areas.

This review was conducted with the assistance of Kazutoshi Najita, Electrical Engineering; and Lyn Zhang, Civil and Environmental Engineering.

Electromagnetic Fields

Our reviewers note that discussion of human health effects related to Electromagnetic Field (EMF) radiation is appropriate, given public concerns surrounding this issue. Instances of grave impacts on human health attributable to EMF radiation from high power transmission lines have been widely reported, and as a result, epidemiological studies have been conducted seeking confirmation of EMF risks. Results have been inconclusive, and moreover, no convincing scientific or physiological basis for detrimental health effects of EMF presently exists. As a consequence of conflicting views on this issue, it is most appropriate to adopt a

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prudent avoidance approach. HECO has taken this approach in this project and has placed multiple circuit lines into cable ducts. The phasing of cables is alternated and the loading of the circuits is balanced so that the magnetic fields will tend to cancel and not have impacts at even short distances outside of the cable ducts. Measured magnetic fields of existing electrical facilities (12kv, 25kv, and 46kv underground and overhead distribution lines) vary from a few tenths of a mG (milliGauss) to about 40 mG. There are no Federal or State of Hawai'i health standard for 60 Hertz magnetic fields.

Traffic Impact Study

Our reviewers examined the Traffic Impact Study (TIS) prepared by Wilbur Smith Associates for and found it generally comprehensive in terms of structure, methodology, explanations and incorporation of enough technical details to allow for an informed review.

The TIS assesses the potential construction impacts of the proposed project upon the traffic system within the central Honolulu area and proposes actions to minimize those impacts. Overall, the document appears to be well written and comprehensive in its approach to most issues. However, there are some concerns regarding the traffic analysis as listed below.

1. For capacity and LOS analysis, there is no evidence shown in the TIS that peak hour factors (PHF) were applied to adjust traffic volumes.
2. The project will significantly affect the operations of the King Street intersections with Ward Ave. and Kalakaua Ave (with average delay during afternoon peak hours greater than 250 sec.). However, no detailed mitigation plan was proposed to address this issue.
3. Traffic volume forecasts throughout the draft were based on historical traffic volumes with a simple annual growth rate of 0.75%. However, the opening of the new Wal-Mart along Keeaumoku Street would significantly increase traffic volumes especially on Makaloa Street and Kapiolani Boulevard. The TIS should consider the volume increase due to the development of the new Wal-Mart.

Thank you for the opportunity to comment on this Draft EIS.

Sincerely,

John T. Harrison, Ph.D.
Environmental Coordinator

cc: OEQC
L.Matsumoto, Belt Collins
K. Najita
L. Zhang
James Moncur